CLAIMS

What is claimed:

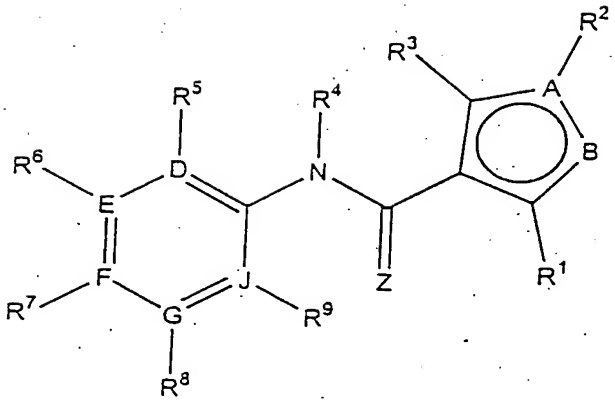
1. A heteroarylcarboxamide compound, or physiologically acceptable salt thereof, which modulates the activity of a protein tyrosine kinase.

2. The compound of claim 1 wherein said protein tyrosine kinase comprises a receptor tyrosine kinase.

3. The compound of claim 2 wherein said receptor tyrosine kinase comprises a fibroblast growth factor receptor (FGFR).

4. The compound of claim 2 wherein said receptor tyrosine kinase comprises a platelet derived growth factor receptor (PDGFR).

5. A heteroarylcarboxamide compound having the following chemical structure:



wherein:

A is selected from the group consisting of oxygen, nitrogen and sulfur;

B is selected from the group consisting of nitrogen and sulfur and it is understood that when B is sulfur and A is nitrogen, said nitrogen is participating in both a single bond and a double bond within the ring so that it cannot be bonded to any atom outside the ring; that is, when B is sulfur, R^2 cannot exist and there is no bond;

D, E, F, G, and J are independently selected from the group consisting of carbon and nitrogen such that the monocyclic heteroaryl six-member ring formed in one known in the chemical arts and, it is understood that, when D, E, F, G or J is nitrogen, R^5, R^6, R^7, R^8 and R^9, respectively, does not exist.

R^1 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkenyl, alkynyl, aryl, heteroaryl and heteroalicyclic;

R^2 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkenyl, alkynyl, aryl, heteroaryl, heteroalicyclic, carbonyl, C-carboxy, S-sulfonamido, sulfonyl, hydroxy, alkoxy, trihalomethanesulfonyl, halo, guanyl, C-amido and C-thioamido;

R^3 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkenyl, alkynyl, aryl, heteroaryl and heteroalicyclic;

Z is selected from the group consisting of oxygen and sulfur;

R^4 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkenyl, alkynyl, aryl heteroaryl, heteroalicyclic, sulfonyl, trihalomethanesulfonyl, hydroxy, alkoxy and C-carboxy;

R^5, R^6, R^7, R^8 and R^9 are independently selected from the group consisting of hydrogen, alkyl, trihaloalkyl, alkenyl, alkynyl, cycycloalkyl, aryl, heteroaryl, heteroalicyclic , hydroxy, alkoxy, cycloalkoxy, aryloxy, heteroaryloxy, heteroalicycloxy, thiohydroxy, thioalkyoxy, thiocycloalkoxy, thioheteraryloxy, thioheteralicycloxy, halo, nitro, cyano, C-O-carbamyl, N-carbamyl, O-thiocarbamyl, N-thiocarbamyl, silyl, phosphonyl, C-carboxy, O-carboxy, N-amido, C-amido, sulfinyl, sulfonyl, S-sulfonamido, N-sulfonamido, trihalomethanesulfonyl, guanyl, guanidino, trihalomethanesulfonamido, amino and $-NR^{13}R^{14}$,

R^{13} and R^{14} are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, carbonyl, C-carboxy, sulfonyl, trihalomethanesulfonyl and, combined, a five- or six-member heteroalicyclic ring containing at least one nitrogen;

and physiologically acceptable salts thereof.

6. The compound or salt of claim 5 wherein A is oxygen and B is nitrogen.

7. The compound or salt of claim 6 wherein R^1 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, aklenyl and alkynyl.

8. The compound or salt of claim 7 wherein R^3 is selected from the group consisting of hydrogen, alkyl, cycloalkyl and aryl.

9. The compound or salt of claim 8 wherein R^4 is hydrogen.

10. The compound or salt of claim 9 wherein R^2 is selected from the group consisting of hydrogen, alkyl an cycloalkyl.

11. The compound or salt of claim 10 wherein Z is oxygen.

12. The compound or salt of claim 11 wherein R^5, R^6, R^8 and R^9 are hydrogen.

13. The compound or salt of claim 12 wherein R^7 is selected from the group consisting of trihalomethyl and trihalomethanesulfonyl.

14. The compound or salt of claim 13 wherein R^5, R^8 and R^9 are hydrogen.

15. The compound or salt of claim 14 wherein R^6 and R^7 combine to form a methylenedioxy or a 1,3-dioxano group.

16. The compound or salt of claim 5 wherein A and B are nitrogen.

17. The compound or salt of claim 16 wherein R^1 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, aklenyl and alkynyl.

18. The compound or salt of claim 17 wherein R^3 is selected from the group consisting of hydrogen, alkyl, cycloalkyl and aryl.

19. The compound or salt of claim 18 wherein R^4 is hydrogen.

20. The compound or salt of claim 19 wherein R^2 is selected from the group consisting of hydrogen, alkyl an cycloalkyl.

21. The compound or salt of claim 20 wherein Z is oxygen.

22. The compound or salt of claim 21 wherein R^5, R^6, R^8 and R^9 are hydrogen.

23. The compound or salt of claim 22 wherein R^7 is selected from the group consisting of trihalomethyl and trihalomethanesulfonyl.

24. The compound or salt of claim 21 wherein R^5, R^8 and R^9 are hydrogen.

25. The compound or salt of claim 24 wherein R^6 and R^7 combine to form a methylenedioxy or a 1,3-dioxano group.

26. The compound or salt of claim 5 wherein J is nitrogen.

27. The compound or salt of claim 26 wherein:

R^7 is selected from the group consisting of trihalomethyl and trihalomethanesulfonyl; and,

R^5, R^6, R^8, and R^9 are hydrogen.

28. The compound or salt of claim 27 wherein R^1 is selected from the group consisting of hydrogen, alkyl and cycloalkyl.

29. The compound or salt of claim 28 wherein R^1 is selected from the group consisting of hydrogen, alkyl and aryl.

30. A method for the treatment or prevention of a disorder characterized by inappropriate protein tyrosine kinase activity comprising administering to an organism afflicted with such a disorder a therapeutically effective amount of one of more of said compounds of claim 1 or a physiologically acceptable salt thereof.

31. The method of claim 30 wherein said therapeutically effective amount of said compound of claim 1 comprises a pharmacological composition.

32. A pharmacological composition of said compound of claim 1.

33. The method of claim 30 wherein said organism comprises a mammal.

34. The method of claim 33 wherein said mammal is a human.

35. The method of claim 30 wherein said disorder comprises cancer.

36. The method of claim 35 wherein said cancer is selected from the group consisting of brain cancer, colon cancer, prostate cancer, kidney cancer, breast cancer, lung cancer, salivary gland cancer, oral cancer, pancreatic cancer, bladder cancer, Kaposi's sarcoma, melanoma and ovarian cancer.

37. The method of claim 30 wherein said disorder comprises a skeletal disorder.

38. The method of claim 30 wherein said disorder comprises a fibrotic disorder.

30. The method of claim 30 wherein said disorder comprises a blood vessel proliferative disorder.

40. The method of claim 38 wherein said fibrotic disorder comprises restinosis, hepatic cirrhosis, glomerular sclerosis, interstitial nephritis, interstitial pulmonary fibrosis, atherosclerosis, wound scarring and scleroderma.

41. A method of inhibiting the metastasis of a cancer comprising administering to an organism in need of such inhibition a therapeutically effective amount of one or more compounds of claim 1.

42. The method of claim 41 wherein said therapeutically effective amount of one or more compounds of claim 1 comprises a pharmacological composition.

43. The method of claim 42 wherein said cancer comprises colon cancer, prostate cancer, pancreatic cancer, Kaposi's sarcoma, ovarian cancer, breast cancer and gliomas.